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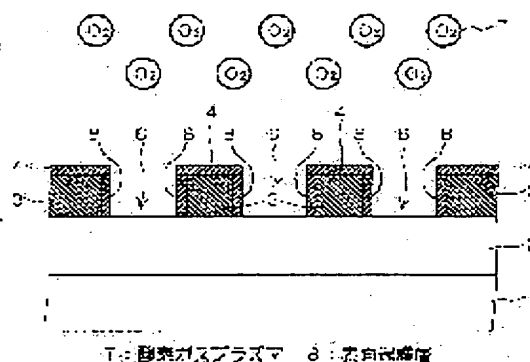
## (54) FORMING METHOD OF INSULATION FILM AND THE INSULATION FILM

## (57)Abstract:

PROBLEM TO BE SOLVED: To provide a method for forming an insulation film and a structure capable of suppressing the increase of the dielectric constant of an interlayer insulation film accompanying change of Si-C<sub>n</sub>H<sub>2n+1</sub> combination to Si-OH combination in the film.

SOLUTION: The first interlayer insulation film 3 of a low dielectric constant is formed on a substrate insulation film 2, and a second interlayer insulation film 4 is formed on the first interlayer insulation film 3.

A photoresist 5 having a patter whose upward of a planned area forming copper wiring is opened is formed on the second interlayer insulation film 4. A recess part 6 is formed by etching the second interlayer insulation film 4 and the first interlayer insulation film 3 by using the photoresist 5 as an etching mask. Next, the photoresist 5 is removed by ashing treatment using oxygen gas plasma 7. The ashing treatment is performed under a condition of plasma formation wherein high frequency electric power is 300 W, atmospheric pressure is 30 Pa, an oxygen flow rate is 100 sccm, and substrate temperature is 25° C.



## LEGAL STATUS

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